WHAT IS CLAIMED IS:

1. An optical waveguide circuit comprising:

an optical waveguide;

a first loss component for causing a diffraction loss to light propagating through said optical waveguide; and

a second loss component provided at least one of before and after said first loss component, for causing a diffraction loss less than the diffraction loss in said first loss component to the light propagating through said optical waveguide.

2. The optical waveguide circuit as claimed in claim 1, further comprising a beam spot size varying section for varying a beam spot size of a lightwave launched into said second loss component.

3. An optical waveguide circuit comprising:

a first optical waveguide having a first width and first thickness;

a second optical waveguide having a second width and second thickness;

a tapered section connected between said first optical waveguide and said second optical waveguide, for varying the first width and first thickness to the second width and second thickness;

a first loss component for causing a diffraction loss

to light propagating through said second optical waveguide; and

a second loss component provided at least one of before and after said first loss component, for causing a diffraction loss less than the diffraction loss in said first loss component to the light propagating through said second optical waveguide.

4. The optical waveguide circuit as claimed in claim 3, wherein one of the following conditions holds: the first width is less than the second width; the first thickness is less than the second thickness; both the first width and first thickness are less than the second width and second thickness; the first width is greater than the second width; the first thickness is greater than the second thickness; both the first width and first thickness are greater than the second width and second thickness.

5. An optical waveguide circuit comprising:

a first optical waveguide having a first width and first thickness;

a second optical waveguide having a second width and second thickness;

a third optical waveguide having a third width and third thickness;

a first tapered section connected between said first optical waveguide and said second optical waveguide, for

varying the first width and first thickness to the second width and second thickness;

a second tapered section connected between said second optical waveguide and said third optical waveguide, for varying the second width and second thickness to the third width and third thickness;

a first loss component for causing a diffraction loss to light propagating through said second optical waveguide; and

a second loss component provided at least one of before and after said first loss component, for causing a diffraction loss less than the diffraction loss in said first loss component to the light propagating through said second optical waveguide.

6. The optical waveguide circuit as claimed in claim 5, wherein one of the following conditions holds: the first width and the third width are less than the second width; the first thickness and the third thickness are less than the second thickness; the first width and the first thickness and the third width and the third thickness are less than the second width and second thickness; the first width and the third width are greater than the second width; the first thickness and the third thickness are greater than the second thickness; the first width and the first thickness and the third width and the third thickness are greater than the second width and the second thickness.

7. The optical waveguide circuit as claimed in claim 1, wherein said optical waveguide comprises a cladding and core composed of silica-based glass.

8. The optical waveguide circuit as claimed in claim 3, wherein said optical waveguide comprises a cladding and core composed of silica-based glass.

9. The optical waveguide circuit as claimed in claim 5, wherein said optical waveguide comprises a cladding and core composed of silica-based glass.

10. The optical waveguide circuit as claimed in claim 7, wherein said first loss component is a groove formed by removing part of a cladding and core from said optical waveguide.

11. The optical waveguide circuit as claimed in claim 8, wherein said first loss component is a groove formed by removing part of a cladding and core from said optical waveguide.

12. The optical waveguide circuit as claimed in claim 9, wherein said first loss component is a groove formed by removing part of a cladding and core from said optical waveguide.

13. The optical waveguide circuit as claimed in claim 10, wherein said groove consists of a plurality of grooves disposed at specified spacings.

14. The optical waveguide circuit as claimed in claim 11, wherein said groove consists of a plurality of grooves disposed at specified spacings.

15. The optical waveguide circuit as claimed in claim 12, wherein said groove consists of a plurality of grooves disposed at specified spacings.

16. The optical waveguide circuit as claimed in claim 10 wherein said groove is filled with a material different from said core.

17. The optical waveguide circuit as claimed in claim 11 wherein said groove is filled with a material different from said core.

18. The optical waveguide circuit as claimed in claim 12 wherein said groove is filled with a material different from said core.

19. The optical waveguide circuit as claimed in claim 16, wherein the material filling said groove has a refractive

index temperature coefficient different in sign from a temperature coefficient of an effective refractive index of said optical waveguide.

20. The optical waveguide circuit as claimed in claim 17, wherein the material filling said groove has a refractive index temperature coefficient different in sign from a temperature coefficient of an effective refractive index of said optical waveguide.

21. The optical waveguide circuit as claimed in claim 18, wherein the material filling said groove has a refractive index temperature coefficient different in sign from a temperature coefficient of an effective refractive index of said optical waveguide.

22. The optical waveguide circuit as claimed in claim 10, wherein said groove includes an element with a specified function.

23. The optical waveguide circuit as claimed in claim 11, wherein said groove includes an element with a specified function.

24. The optical waveguide circuit as claimed in claim 12, wherein said groove includes an element with a specified function.

25. The optical waveguide circuit as claimed in claim 22, wherein said element is fixed with an adhesive filling said groove.

26. The optical waveguide circuit as claimed in claim 23, wherein said element is fixed with an adhesive filling said groove.

27. The optical waveguide circuit as claimed in claim 24, wherein said element is fixed with an adhesive filling said groove.

28. The optical waveguide circuit as claimed in claim 22, wherein said element consists of a half wavelength plate.

29. The optical waveguide circuit as claimed in claim 23, wherein said element consists of a half wavelength plate.

30. The optical waveguide circuit as claimed in claim 24, wherein said element consists of a half wavelength plate.

31. The optical waveguide circuit as claimed in claim 22, wherein said element consists of a wavelength pass filter that transmits only light with a specified wavelength.

32. The optical waveguide circuit as claimed in claim 23,

wherein said element consists of a wavelength pass filter that transmits only light with a specified wavelength.

33. The optical waveguide circuit as claimed in claim 24, wherein said element consists of a wavelength pass filter that transmits only light with a specified wavelength.

34. The optical waveguide circuit as claimed in claim 7, wherein said second loss component consists of a waveguide gap formed by replacing part of a core of said optical waveguide with a cladding.

35. The optical waveguide circuit as claimed in claim 8, wherein said second loss component consists of a waveguide gap formed by replacing part of a core of said optical waveguide with a cladding.

36. The optical waveguide circuit as claimed in claim 9, wherein said second loss component consists of a waveguide gap formed by replacing part of a core of said optical waveguide with a cladding.

37. The optical waveguide circuit as claimed in claim 10, wherein said second loss component consists of a waveguide gap formed by replacing part of a core of said optical waveguide with a cladding.

38. The optical waveguide circuit as claimed in claim 11, wherein said second loss component consists of a waveguide gap formed by replacing part of a core of said optical waveguide with a cladding.

39. The optical waveguide circuit as claimed in claim 12, wherein said second loss component consists of a waveguide gap formed by replacing part of a core of said optical waveguide with a cladding.

40. The optical waveguide circuit as claimed in claim 34, wherein said waveguide gap consists of a plurality of waveguide gaps disposed at least one of before and after said first loss component with a specified spacing, and said waveguide gaps reduce their width as they are distant from said first loss component.

41. The optical waveguide circuit as claimed in claim 35, wherein said waveguide gap consists of a plurality of waveguide gaps disposed at least one of before and after said first loss component with a specified spacing, and said waveguide gaps reduce their width as they are distant from said first loss component.

42. The optical waveguide circuit as claimed in claim 36, wherein said waveguide gap consists of a plurality of waveguide gaps disposed at least one of before and after said

first loss component with a specified spacing, and said waveguide gaps reduce their width as they are distant from said first loss component.

43. The optical waveguide circuit as claimed in claim 37, wherein said waveguide gap consists of a plurality of waveguide gaps disposed at least one of before and after said first loss component with a specified spacing, and said waveguide gaps reduce their width as they are distant from said first loss component.

44. The optical waveguide circuit as claimed in claim 38, wherein said waveguide gap consists of a plurality of waveguide gaps disposed at least one of before and after said first loss component with a specified spacing, and said waveguide gaps reduce their width as they are distant from said first loss component.

45. The optical waveguide circuit as claimed in claim 39, wherein said waveguide gap consists of a plurality of waveguide gaps disposed at least one of before and after said first loss component with a specified spacing, and said waveguide gaps reduce their width as they are distant from said first loss component.

46. The optical waveguide circuit as claimed in claim 19, wherein

said optical waveguide comprises a plurality of arrayed-waveguides; and

said groove is formed across said arrayed-waveguides, and wherein said optical waveguide circuit further comprises:

slab waveguides connected to both ends of said arrayed-waveguides.

47. The optical waveguide circuit as claimed in claim 20, wherein

said optical waveguide comprises a plurality of arrayed-waveguides; and

said groove is formed across said arrayed-waveguides, and wherein said optical waveguide circuit further comprises:

slab waveguides connected to both ends of said arrayed-waveguides.

48. The optical waveguide circuit as claimed in claim 21, wherein

said optical waveguide comprises a plurality of arrayed-waveguides; and

said groove is formed across said arrayed-waveguides, and wherein said optical waveguide circuit further comprises:

slab waveguides connected to both ends of said arrayed-waveguides.

49. The optical waveguide circuit as claimed in claim 28, wherein

said optical waveguide comprises a plurality of arrayed-waveguides; and

said groove is formed across said arrayed-waveguides, and wherein said optical waveguide circuit further comprises:

slab waveguides connected to both ends of said arrayed-waveguides.

50. The optical waveguide circuit as claimed in claim 29, wherein

said optical waveguide comprises a plurality of arrayed-waveguides; and

said groove is formed across said arrayed-waveguides, and wherein said optical waveguide circuit further comprises:

slab waveguides connected to both ends of said arrayed-waveguides.

51. The optical waveguide circuit as claimed in claim 30, wherein

said optical waveguide comprises a plurality of arrayed-waveguides; and

said groove is formed across said arrayed-waveguides, and wherein said optical waveguide circuit further comprises:

slab waveguides connected to both ends of said arrayed-waveguides.

52. The optical waveguide circuit as claimed in claim 34, wherein

said optical waveguide comprises a plurality of arrayed-waveguides; and

said groove is formed across said arrayed-waveguides, and wherein said optical waveguide circuit further comprises:

slab waveguides connected to both ends of said arrayed-waveguides.

53. The optical waveguide circuit as claimed in claim 35, wherein

said optical waveguide comprises a plurality of arrayed-waveguides; and

said groove is formed across said arrayed-waveguides, and wherein said optical waveguide circuit further comprises:

slab waveguides connected to both ends of said arrayed-waveguides.

54. The optical waveguide circuit as claimed in claim 36, wherein

said optical waveguide comprises a plurality of arrayed-waveguides; and

said groove is formed across said arrayed-waveguides, and wherein said optical waveguide circuit further comprises:

slab waveguides connected to both ends of said arrayed-waveguides.

55. The optical waveguide circuit as claimed in claims 37, wherein

said optical waveguide comprises a plurality of arrayed-waveguides; and

said groove is formed across said arrayed-waveguides, and wherein said optical waveguide circuit further comprises:

slab waveguides connected to both ends of said arrayed-waveguides.

56. The optical waveguide circuit as claimed in claim 38, wherein

said optical waveguide comprises a plurality of arrayed-waveguides; and

said groove is formed across said arrayed-waveguides, and wherein said optical waveguide circuit further comprises:

slab waveguides connected to both ends of said arrayed-waveguides.

57. The optical waveguide circuit as claimed in claim 39, wherein

said optical waveguide comprises a plurality of arrayed-waveguides; and

said groove is formed across said arrayed-waveguides, and wherein said optical waveguide circuit further comprises:

slab waveguides connected to both ends of said arrayed-waveguides.

58. The optical waveguide circuit as claimed in claim 19, wherein

said optical waveguide comprises two arm waveguides with different length; and

said groove is formed across at least one of said arm waveguides, and wherein said optical waveguide circuit further comprises:

directional couplers connected to both ends of said arm waveguides.

59. The optical waveguide circuit as claimed in claim 20, wherein

said optical waveguide comprises two arm waveguides with different length; and

said groove is formed across at least one of said arm waveguides, and wherein said optical waveguide circuit further comprises:

directional couplers connected to both ends of said arm waveguides.

60. The optical waveguide circuit as claimed in claim 21, wherein

said optical waveguide comprises two arm waveguides with different length; and

said groove is formed across at least one of said arm waveguides, and wherein said optical waveguide circuit further comprises:

directional couplers connected to both ends of said arm waveguides.

61. The optical waveguide circuit as claimed in claim 34, wherein

said optical waveguide comprises two arm waveguides with different length; and

said groove is formed across at least one of said arm waveguides, and wherein said optical waveguide circuit further comprises:

directional couplers connected to both ends of said arm waveguides.

62. The optical waveguide circuit as claimed in claim 35, wherein

said optical waveguide comprises two arm waveguides with different length; and

said groove is formed across at least one of said arm waveguides, and wherein said optical waveguide circuit further comprises:

directional couplers connected to both ends of said arm waveguides.

63. The optical waveguide circuit as claimed in claim 36, wherein

said optical waveguide comprises two arm waveguides with different length; and

said groove is formed across at least one of said arm waveguides, and wherein said optical waveguide circuit

further comprises:

directional couplers connected to both ends of said arm waveguides.

64. The optical waveguide circuit as claimed in claim 37, wherein

said optical waveguide comprises two arm waveguides with different length; and

said groove is formed across at least one of said arm waveguides, and wherein said optical waveguide circuit further comprises:

directional couplers connected to both ends of said arm waveguides.

65. The optical waveguide circuit as claimed in claim 38, wherein

said optical waveguide comprises two arm waveguides with different length; and

said groove is formed across at least one of said arm waveguides, and wherein said optical waveguide circuit further comprises:

directional couplers connected to both ends of said arm waveguides.

66. The optical waveguide circuit as claimed in claim 39, wherein

said optical waveguide comprises two arm waveguides

with different length; and

said groove is formed across at least one of said arm waveguides, and wherein said optical waveguide circuit further comprises:

directional couplers connected to both ends of said arm waveguides.

67. The optical waveguide circuit as claimed in claim 19, further comprising:

a UV written grating in said optical waveguide; and

a semiconductor laser diode mounted at an end of said optical waveguide, wherein

said groove is formed across said optical waveguide between said UV written grating and said semiconductor laser diode.

68. The optical waveguide circuit as claimed in claim 20, further comprising:

a UV written grating in said optical waveguide; and

a semiconductor laser diode mounted at an end of said optical waveguide, wherein

said groove is formed across said optical waveguide between said UV written grating and said semiconductor laser diode.

69. The optical waveguide circuit as claimed in claim 21, further comprising:

a UV written grating in said optical waveguide; and

a semiconductor laser diode mounted at an end of said optical waveguide, wherein

said groove is formed across said optical waveguide between said UV written grating and said semiconductor laser diode.

70. The optical waveguide circuit as claimed in claim 34, further comprising:

a UV written grating in said optical waveguide; and

a semiconductor laser diode mounted at an end of said optical waveguide, wherein

said groove is formed across said optical waveguide between said UV written grating and said semiconductor laser diode.

71. The optical waveguide circuit as claimed in claim 35, further comprising:

a UV written grating in said optical waveguide; and

a semiconductor laser diode mounted at an end of said optical waveguide, wherein

said groove is formed across said optical waveguide between said UV written grating and said semiconductor laser diode.

72. The optical waveguide circuit as claimed in claim 36, further comprising:

a UV written grating in said optical waveguide; and

a semiconductor laser diode mounted at an end of said optical waveguide, wherein

said groove is formed across said optical waveguide between said UV written grating and said semiconductor laser diode.

73. The optical waveguide circuit as claimed in claim 37, further comprising:

a UV written grating in said optical waveguide; and

a semiconductor laser diode mounted at an end of said optical waveguide, wherein

said groove is formed across said optical waveguide between said UV written grating and said semiconductor laser diode.

74. The optical waveguide circuit as claimed in claim 38, further comprising:

a UV written grating in said optical waveguide; and

a semiconductor laser diode mounted at an end of said optical waveguide, wherein

said groove is formed across said optical waveguide between said UV written grating and said semiconductor laser diode.

75. The optical waveguide circuit as claimed in claim 39, further comprising:

a UV written grating in said optical waveguide; and

a semiconductor laser diode mounted at an end of said optical waveguide, wherein

said groove is formed across said optical waveguide between said UV written grating and said semiconductor laser diode.

76. The optical waveguide circuit as claimed in claim 7, wherein said first loss component consists of an intersection of said optical waveguide and another optical waveguide.

77. The optical waveguide circuit as claimed in claim 8, wherein said first loss component consists of an intersection of said optical waveguide and another optical waveguide.

78. The optical waveguide circuit as claimed in claim 9, wherein said first loss component consists of an intersection of said optical waveguide and another optical waveguide.

79. The optical waveguide circuit as claimed in claim 1, wherein said optical waveguide consists of a slab waveguide.

80. The optical waveguide circuit as claimed in claim 79, wherein said slab waveguide comprises a cladding and core composed of silica-based glass.

81. The optical waveguide circuit as claimed in claim 80,

wherein said first loss component consists of a groove formed by removing part of the cladding and core of said slab waveguide.

82. The optical waveguide circuit as claimed in claim 81, wherein said groove consists of a plurality of grooves that divide said slab waveguide, and have uneven widths in accordance with positions of dividing said slab waveguide.

83. The optical waveguide circuit as claimed in claim 81, wherein said groove consists of a plurality of grooves that are placed at specified spacings.

84. The optical waveguide circuit as claimed in claim 81, wherein said groove is filled with a materiel different from a material of said core.

85. The optical waveguide circuit as claimed in claim 84, wherein the material filling said groove has refractive index temperature dependence with a sign opposite to a sign of a temperature coefficient of an effective refractive index of said slab waveguide.

86. The optical waveguide circuit as claimed in claim 81, wherein said groove includes an element with a specified function.

87. The optical waveguide circuit as claimed in claim 86, wherein said element is fixed with an adhesive filling said groove.

88. The optical waveguide circuit as claimed in claim 86, wherein said element consists of a half wavelength plate.

89. The optical waveguide circuit as claimed in claim 80, wherein said second loss component consists of a waveguide gap formed by replacing part of the core of said slab waveguide with the cladding.

90. The optical waveguide circuit as claimed in claim 81, wherein said second loss component consists of a waveguide gap formed by replacing part of the core of said slab waveguide with the cladding.

91. The optical waveguide circuit as claimed in claim 89, wherein said waveguide gap consists of a plurality of waveguide gaps that divide said slab waveguide, and varies its widths in accordance with positions of dividing said slab waveguide.

92. The optical waveguide circuit as claimed in claim 90, wherein said waveguide gap consists of a plurality of waveguide gaps that divide said slab waveguide, and varies its widths in accordance with positions of dividing said slab

waveguide.

93. The optical waveguide circuit as claimed in claim 89, wherein said waveguide gap consists of a plurality of waveguide gaps disposed at least one of before and after said first loss component with a specified spacing between said waveguide gaps, and said waveguide gaps reduce their width as they are distant from said first loss component.

94. The optical waveguide circuit as claimed in claim 90, wherein said waveguide gap consists of a plurality of waveguide gaps disposed at least one of before and after said first loss component with a specified spacing between said waveguide gaps, and said waveguide gaps reduce their width as they are distant from said first loss component.

95. The optical waveguide circuit as claimed in claim 85, wherein said optical waveguide circuit comprises:

two slab waveguides consisting of first and second slab waveguides;

arrayed-waveguides for interconnecting first ends of said first and second slab waveguides; and

input and output waveguides connected to second ends of said first and second slab waveguides, respectively, and wherein

said groove is formed across at least one of said two slab waveguides.

96. The optical waveguide circuit as claimed in claim 88, wherein said optical waveguide circuit comprises:

two slab waveguides consisting of first and second slab waveguides;

arrayed-waveguides for interconnecting first ends of said first and second slab waveguides; and

input and output waveguides connected to second ends of said first and second slab waveguides, respectively, and wherein

said groove is formed across at least one of said two slab waveguides.

97. The optical waveguide circuit as claimed in claim 89, wherein said optical waveguide circuit comprises:

two slab waveguides consisting of first and second slab waveguides;

arrayed-waveguides for interconnecting first ends of said first and second slab waveguides; and

input and output waveguides connected to second ends of said first and second slab waveguides, respectively, and wherein

said groove is formed across at least one of said two slab waveguides.

98. The optical waveguide circuit as claimed in claim 90, wherein said optical waveguide circuit comprises:

two slab waveguides consisting of first and second slab waveguides;

arrayed-waveguides for interconnecting first ends of said first and second slab waveguides; and

input and output waveguides connected to second ends of said first and second slab waveguides, respectively, and wherein

said groove is formed across at least one of said two slab waveguides.

99. The optical waveguide circuit as claimed in claim 7, wherein said second loss component consists of a stripe-like core formed by replacing part of the core of said optical waveguide with the cladding in a stripe-like shape.

100. The optical waveguide circuit as claimed in claim 8, wherein said second loss component consists of a stripe-like core formed by replacing part of the core of said optical waveguide with the cladding in a stripe-like shape.

101. The optical waveguide circuit as claimed in claim 9, wherein said second loss component consists of a stripe-like core formed by replacing part of the core of said optical waveguide with the cladding in a stripe-like shape.

102. The optical waveguide circuit as claimed in claim 10, wherein said second loss component consists of a stripe-like

core formed by replacing part of the core of said optical waveguide with the cladding in a stripe-like shape.

103. The optical waveguide circuit as claimed in claim 11, wherein said second loss component consists of a stripe-like core formed by replacing part of the core of said optical waveguide with the cladding in a stripe-like shape.

104. The optical waveguide circuit as claimed in claim 12, wherein said second loss component consists of a stripe-like core formed by replacing part of the core of said optical waveguide with the cladding in a stripe-like shape.

105. The optical waveguide circuit as claimed in claim 46, wherein said second loss component consists of a stripe-like core formed by replacing part of the core of said optical waveguide with the cladding in a stripe-like shape.

106. The optical waveguide circuit as claimed in claim 47, wherein said second loss component consists of a stripe-like core formed by replacing part of the core of said optical waveguide with the cladding in a stripe-like shape.

107. The optical waveguide circuit as claimed in claim 48, wherein said second loss component consists of a stripe-like core formed by replacing part of the core of said optical waveguide with the cladding in a stripe-like shape.

108. The optical waveguide circuit as claimed in claim 49, wherein said second loss component consists of a stripe-like core formed by replacing part of the core of said optical waveguide with the cladding in a stripe-like shape.

109. The optical waveguide circuit as claimed in claim 50, wherein said second loss component consists of a stripe-like core formed by replacing part of the core of said optical waveguide with the cladding in a stripe-like shape.

110. The optical waveguide circuit as claimed in claim 51, wherein said second loss component consists of a stripe-like core formed by replacing part of the core of said optical waveguide with the cladding in a stripe-like shape.

111. The optical waveguide circuit as claimed in claim 52, wherein said second loss component consists of a stripe-like core formed by replacing part of the core of said optical waveguide with the cladding in a stripe-like shape.

112. The optical waveguide circuit as claimed in claim 53, wherein said second loss component consists of a stripe-like core formed by replacing part of the core of said optical waveguide with the cladding in a stripe-like shape.

113. The optical waveguide circuit as claimed in claim 54,

wherein said second loss component consists of a stripe-like core formed by replacing part of the core of said optical waveguide with the cladding in a stripe-like shape.

114. The optical waveguide circuit as claimed in claim 55, wherein said second loss component consists of a stripe-like core formed by replacing part of the core of said optical waveguide with the cladding in a stripe-like shape.

115. The optical waveguide circuit as claimed in claim 56, wherein said second loss component consists of a stripe-like core formed by replacing part of the core of said optical waveguide with the cladding in a stripe-like shape.

116. The optical waveguide circuit as claimed in claim 57, wherein said second loss component consists of a stripe-like core formed by replacing part of the core of said optical waveguide with the cladding in a stripe-like shape.

117. The optical waveguide circuit as claimed in claim 80, wherein said second loss component consists of a stripe-like core formed by replacing part of the core of said optical waveguide with the cladding in a stripe-like shape.

118. The optical waveguide circuit as claimed in claim 81, wherein said second loss component consists of a stripe-like core formed by replacing part of the core of said optical

waveguide with the cladding in a stripe-like shape.

119. The optical waveguide circuit as claimed in claim 7, wherein said second loss component consists of a distributed core formed by replacing part of the core of said optical waveguide with the cladding in a dotted shape.

120. The optical waveguide circuit as claimed in claim 8, wherein said second loss component consists of a distributed core formed by replacing part of the core of said optical waveguide with the cladding in a dotted shape.

121. The optical waveguide circuit as claimed in claim 9, wherein said second loss component consists of a distributed core formed by replacing part of the core of said optical waveguide with the cladding in a dotted shape.

122. The optical waveguide circuit as claimed in claim 10, wherein said second loss component consists of a distributed core formed by replacing part of the core of said optical waveguide with the cladding in a dotted shape.

123. The optical waveguide circuit as claimed in claim 11, wherein said second loss component consists of a distributed core formed by replacing part of the core of said optical waveguide with the cladding in a dotted shape.

124. The optical waveguide circuit as claimed in claim 12, wherein said second loss component consists of a distributed core formed by replacing part of the core of said optical waveguide with the cladding in a dotted shape.

125. The optical waveguide circuit as claimed in claim 46, wherein said second loss component consists of a distributed core formed by replacing part of the core of said optical waveguide with the cladding in a dotted shape.

126. The optical waveguide circuit as claimed in claim 47, wherein said second loss component consists of a distributed core formed by replacing part of the core of said optical waveguide with the cladding in a dotted shape.

127. The optical waveguide circuit as claimed in claim 48, wherein said second loss component consists of a distributed core formed by replacing part of the core of said optical waveguide with the cladding in a dotted shape.

128. The optical waveguide circuit as claimed in claim 49, wherein said second loss component consists of a distributed core formed by replacing part of the core of said optical waveguide with the cladding in a dotted shape.

129. The optical waveguide circuit as claimed in claim 50, wherein said second loss component consists of a distributed

core formed by replacing part of the core of said optical waveguide with the cladding in a dotted shape.

130. The optical waveguide circuit as claimed in claim 51, wherein said second loss component consists of a distributed core formed by replacing part of the core of said optical waveguide with the cladding in a dotted shape.

131. The optical waveguide circuit as claimed in claim 52, wherein said second loss component consists of a distributed core formed by replacing part of the core of said optical waveguide with the cladding in a dotted shape.

132. The optical waveguide circuit as claimed in claim 53, wherein said second loss component consists of a distributed core formed by replacing part of the core of said optical waveguide with the cladding in a dotted shape.

133. The optical waveguide circuit as claimed in claim 54, wherein said second loss component consists of a distributed core formed by replacing part of the core of said optical waveguide with the cladding in a dotted shape.

134. The optical waveguide circuit as claimed in claim 55, wherein said second loss component consists of a distributed core formed by replacing part of the core of said optical waveguide with the cladding in a dotted shape.

135. The optical waveguide circuit as claimed in claim 56, wherein said second loss component consists of a distributed core formed by replacing part of the core of said optical waveguide with the cladding in a dotted shape.

136. The optical waveguide circuit as claimed in claim 57, wherein said second loss component consists of a distributed core formed by replacing part of the core of said optical waveguide with the cladding in a dotted shape.

137. The optical waveguide circuit as claimed in claim 80, wherein said second loss component consists of a distributed core formed by replacing part of the core of said optical waveguide with the cladding in a dotted shape.

138. The optical waveguide circuit as claimed in claim 81, wherein said second loss component consists of a distributed core formed by replacing part of the core of said optical waveguide with the cladding in a dotted shape.

139. The optical waveguide circuit as claimed in claim 7, wherein said second loss component consists of a groove formed by removing part of the cladding and core from said optical waveguide, and wherein said groove is filled with air or a material with a specified refractive index.

140. The optical waveguide circuit as claimed in claim 8, wherein said second loss component consists of a groove formed by removing part of the cladding and core from said optical waveguide, and wherein said groove is filled with air or a material with a specified refractive index.

141. The optical waveguide circuit as claimed in claim 9, wherein said second loss component consists of a groove formed by removing part of the cladding and core from said optical waveguide, and wherein said groove is filled with air or a material with a specified refractive index.

142. The optical waveguide circuit as claimed in claim 10, wherein said second loss component consists of a groove formed by removing part of the cladding and core from said optical waveguide, and wherein said groove is filled with air or a material with a specified refractive index.

143. The optical waveguide circuit as claimed in claim 11, wherein said second loss component consists of a groove formed by removing part of the cladding and core from said optical waveguide, and wherein said groove is filled with air or a material with a specified refractive index.

144. The optical waveguide circuit as claimed in claim 12 wherein said second loss component consists of a groove formed by removing part of the cladding and core from said optical

waveguide, and wherein said groove is filled with air or a material with a specified refractive index.

145. The optical waveguide circuit as claimed in claim 46, wherein said second loss component consists of a groove formed by removing part of the cladding and core from said optical waveguide, and wherein said groove is filled with air or a material with a specified refractive index.

146. The optical waveguide circuit as claimed in claim 47, wherein said second loss component consists of a groove formed by removing part of the cladding and core from said optical waveguide, and wherein said groove is filled with air or a material with a specified refractive index.

147. The optical waveguide circuit as claimed in claim 48, wherein said second loss component consists of a groove formed by removing part of the cladding and core from said optical waveguide, and wherein said groove is filled with air or a material with a specified refractive index.

148. The optical waveguide circuit as claimed in claim 49, wherein said second loss component consists of a groove formed by removing part of the cladding and core from said optical waveguide, and wherein said groove is filled with air or a material with a specified refractive index.

149. The optical waveguide circuit as claimed in claim 50, wherein said second loss component consists of a groove formed by removing part of the cladding and core from said optical waveguide, and wherein said groove is filled with air or a material with a specified refractive index.

150. The optical waveguide circuit as claimed in claim 51, wherein said second loss component consists of a groove formed by removing part of the cladding and core from said optical waveguide, and wherein said groove is filled with air or a material with a specified refractive index.

151. The optical waveguide circuit as claimed in claim 52, wherein said second loss component consists of a groove formed by removing part of the cladding and core from said optical waveguide, and wherein said groove is filled with air or a material with a specified refractive index.

152. The optical waveguide circuit as claimed in claim 53, wherein said second loss component consists of a groove formed by removing part of the cladding and core from said optical waveguide, and wherein said groove is filled with air or a material with a specified refractive index.

153. The optical waveguide circuit as claimed in claim 54, wherein said second loss component consists of a groove formed by removing part of the cladding and core from said optical

waveguide, and wherein said groove is filled with air or a material with a specified refractive index.

154. The optical waveguide circuit as claimed in claim 55, wherein said second loss component consists of a groove formed by removing part of the cladding and core from said optical waveguide, and wherein said groove is filled with air or a material with a specified refractive index.

155. The optical waveguide circuit as claimed in claim 56, wherein said second loss component consists of a groove formed by removing part of the cladding and core from said optical waveguide, and wherein said groove is filled with air or a material with a specified refractive index.

156. The optical waveguide circuit as claimed in claim 57, wherein said second loss component consists of a groove formed by removing part of the cladding and core from said optical waveguide, and wherein said groove is filled with air or a material with a specified refractive index.

157. The optical waveguide circuit as claimed in claim 80, wherein said second loss component consists of a groove formed by removing part of the cladding and core from said optical waveguide, and wherein said groove is filled with air or a material with a specified refractive index.

158. The optical waveguide circuit as claimed in claim 81, wherein said second loss component consists of a groove formed by removing part of the cladding and core from said optical waveguide, and wherein said groove is filled with air or a material with a specified refractive index.

159. The optical waveguide circuit as claimed in claim 7, wherein said second loss component consists of an intersection of said optical waveguide and another optical waveguide.

160. The optical waveguide circuit as claimed in claim 8, wherein said second loss component consists of an intersection of said optical waveguide and another optical waveguide.

161. The optical waveguide circuit as claimed in claim 9, wherein said second loss component consists of an intersection of said optical waveguide and another optical waveguide.

162. The optical waveguide circuit as claimed in claim 10, wherein said second loss component consists of an intersection of said optical waveguide and another optical waveguide.

163. The optical waveguide circuit as claimed in claim 11, wherein said second loss component consists of an intersection of said optical waveguide and another optical waveguide.

164. The optical waveguide circuit as claimed in claim 12,

wherein said second loss component consists of an intersection of said optical waveguide and another optical waveguide.

165. The optical waveguide circuit as claimed in claim 46, wherein said second loss component consists of an intersection of said optical waveguide and another optical waveguide.

166. The optical waveguide circuit as claimed in claim 47, wherein said second loss component consists of an intersection of said optical waveguide and another optical waveguide.

167. The optical waveguide circuit as claimed in claim 48, wherein said second loss component consists of an intersection of said optical waveguide and another optical waveguide.

168. The optical waveguide circuit as claimed in claim 49, wherein said second loss component consists of an intersection of said optical waveguide and another optical waveguide.

169. The optical waveguide circuit as claimed in claim 50, wherein said second loss component consists of an intersection of said optical waveguide and another optical waveguide.

170. The optical waveguide circuit as claimed in claim 51, wherein said second loss component consists of an intersection of said optical waveguide and another optical waveguide.

171. The optical waveguide circuit as claimed in claim 52, wherein said second loss component consists of an intersection of said optical waveguide and another optical waveguide.

172. The optical waveguide circuit as claimed in claim 53, wherein said second loss component consists of an intersection of said optical waveguide and another optical waveguide.

173. The optical waveguide circuit as claimed in claim 54, wherein said second loss component consists of an intersection of said optical waveguide and another optical waveguide.

174. The optical waveguide circuit as claimed in claim 55, wherein said second loss component consists of an intersection of said optical waveguide and another optical waveguide.

175. The optical waveguide circuit as claimed in claim 56, wherein said second loss component consists of an intersection of said optical waveguide and another optical waveguide.

176. The optical waveguide circuit as claimed in claim 57, wherein said second loss component consists of an intersection of said optical waveguide and another optical waveguide.

177. The optical waveguide circuit as claimed in claim 7, wherein said second loss component consists of a region having, by laser irradiation of part of the cladding of said optical

waveguide, a refractive index higher than a refractive index of a region of the cladding not subjected to the laser irradiation.

178. The optical waveguide circuit as claimed in claim 8, wherein said second loss component consists of a region having, by laser irradiation of part of the cladding of said optical waveguide, a refractive index higher than a refractive index of a region of the cladding not subjected to the laser irradiation.

179. The optical waveguide circuit as claimed in claim 9, wherein said second loss component consists of a region having, by laser irradiation of part of the cladding of said optical waveguide, a refractive index higher than a refractive index of a region of the cladding not subjected to the laser irradiation.

180. The optical waveguide circuit as claimed in claim 10, wherein said second loss component consists of a region having, by laser irradiation of part of the cladding of said optical waveguide, a refractive index higher than a refractive index of a region of the cladding not subjected to the laser irradiation.

181. The optical waveguide circuit as claimed in claim 11, wherein said second loss component consists of a region having,

by laser irradiation of part of the cladding of said optical waveguide, a refractive index higher than a refractive index of a region of the cladding not subjected to the laser irradiation.

182. The optical waveguide circuit as claimed in claim 12, wherein said second loss component consists of a region having, by laser irradiation of part of the cladding of said optical waveguide, a refractive index higher than a refractive index of a region of the cladding not subjected to the laser irradiation.

183. The optical waveguide circuit as claimed in claim 46, wherein said second loss component consists of a region having, by laser irradiation of part of the cladding of said optical waveguide, a refractive index higher than a refractive index of a region of the cladding not subjected to the laser irradiation.

184. The optical waveguide circuit as claimed in claim 47, wherein said second loss component consists of a region having, by laser irradiation of part of the cladding of said optical waveguide, a refractive index higher than a refractive index of a region of the cladding not subjected to the laser irradiation.

185. The optical waveguide circuit as claimed in claim 48,

wherein said second loss component consists of a region having, by laser irradiation of part of the cladding of said optical waveguide, a refractive index higher than a refractive index of a region of the cladding not subjected to the laser irradiation.

186. The optical waveguide circuit as claimed in claim 49, wherein said second loss component consists of a region having, by laser irradiation of part of the cladding of said optical waveguide, a refractive index higher than a refractive index of a region of the cladding not subjected to the laser irradiation.

187. The optical waveguide circuit as claimed in claim 50, wherein said second loss component consists of a region having, by laser irradiation of part of the cladding of said optical waveguide, a refractive index higher than a refractive index of a region of the cladding not subjected to the laser irradiation.

188. The optical waveguide circuit as claimed in claim 51, wherein said second loss component consists of a region having, by laser irradiation of part of the cladding of said optical waveguide, a refractive index higher than a refractive index of a region of the cladding not subjected to the laser irradiation.

189. The optical waveguide circuit as claimed in claim 52, wherein said second loss component consists of a region having, by laser irradiation of part of the cladding of said optical waveguide, a refractive index higher than a refractive index of a region of the cladding not subjected to the laser irradiation.

190. The optical waveguide circuit as claimed in claim 53, wherein said second loss component consists of a region having, by laser irradiation of part of the cladding of said optical waveguide, a refractive index higher than a refractive index of a region of the cladding not subjected to the laser irradiation.

191. The optical waveguide circuit as claimed in claim 54, wherein said second loss component consists of a region having, by laser irradiation of part of the cladding of said optical waveguide, a refractive index higher than a refractive index of a region of the cladding not subjected to the laser irradiation.

192. The optical waveguide circuit as claimed in claim 55, wherein said second loss component consists of a region having, by laser irradiation of part of the cladding of said optical waveguide, a refractive index higher than a refractive index of a region of the cladding not subjected to the laser irradiation.

193. The optical waveguide circuit as claimed in claim 56, wherein said second loss component consists of a region having, by laser irradiation of part of the cladding of said optical waveguide, a refractive index higher than a refractive index of a region of the cladding not subjected to the laser irradiation.

194. The optical waveguide circuit as claimed in claim 57, wherein said second loss component consists of a region having, by laser irradiation of part of the cladding of said optical waveguide, a refractive index higher than a refractive index of a region of the cladding not subjected to the laser irradiation.